



UL LLC  
1075 W Lambert Rd Suite B  
Brea, CA 92821

## Photometric Test Report

Relevant Standards  
IES LM-79-2008  
ANSI C82.77-2002

Prepared For  
**Auroralight Inc**  
2742 Loker Ave. West  
Carlsbad, CA 92010

Catalog Number  
**LBD250-C8-GTL-NL-12-30-25 (NO LOUVERS, 3000K)**  
Order Number  
11263738  
Test Number  
1254210

Test Date

2016-07-27

Prepared By

Tony Rubio, Technician

Approved By

Eric Gaudreau, Senior Engineering Associate

The results contained in this report pertain only to the tested sample.  
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**Luminaire Description:** Conical 8" stacked copper shades with no louvers and cylindrical 25" copper stem with brass base  
**Lamp:** Six (6) Cree XPL-L 3000K LEDs  
**Mounting:** Path/Area  
**Ballast/Driver:** L.T.F. DL112W480C24LP6?-0000

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 8.00 in.  
Luminous Height: 1.000 in.

**Summary of Results**

Roadway Classification: Type V, Very Short  
Cutoff Classification: Cutoff  
BUG Rating: B0 U1 G0

**Test Conditions**

Test Temperature: 24.8 °C  
Voltage: 12.04 VAC  
Current: 1.873 A  
Power: 13.29 W  
Power Factor: 0.589  
Frequency: 60 Hz  
Current THD: 77.4 %

Tested in 30 planes left side, 30 planes right side, left and right averaged  
Vertical test increments are 2.5 degrees  
Test distance exceeds five times the greatest luminous opening of luminaire

Laboratory results may not be representative of field performance  
Ballast factors have not been applied



## Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	12.04 VAC	1.873 A	13.29 W	0.589	60 Hz	77.4 %

### Summary of Results

#### Spacing Criteria

0-180: 2.36

90-270: 2.36

Total Lumen Output:

350.2 Lumens

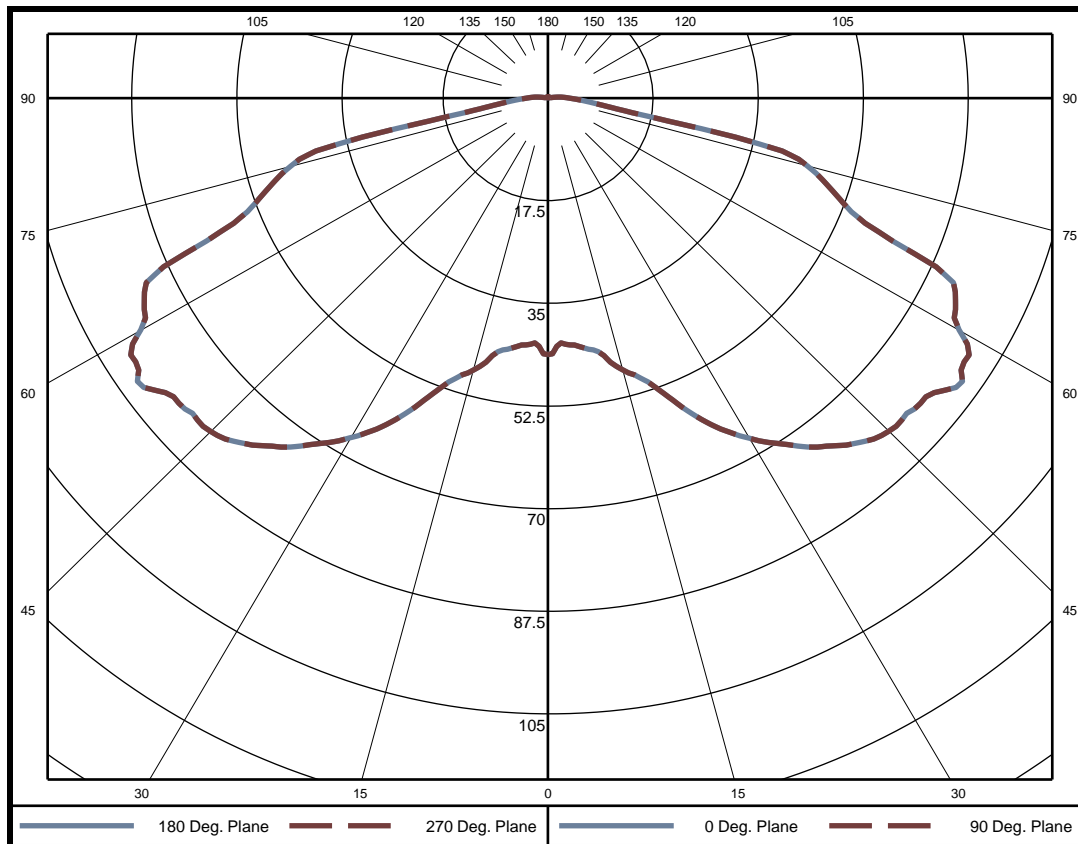
Luminaire Efficacy:

26.4 lm/w

Maximum Candela:

84 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	1.01	0.3%	60-65	37.19	10.6%	120-125	0.13	0.0%
5-10	3.07	0.9%	65-70	31.11	8.9%	125-130	0.11	0.0%
10-15	5.43	1.6%	70-75	25.39	7.3%	130-135	0.09	0.0%
15-20	8.25	2.4%	75-80	17.61	5.0%	135-140	0.08	0.0%
20-25	11.87	3.4%	80-85	5.20	1.5%	140-145	0.06	0.0%
25-30	16.19	4.6%	85-90	2.74	0.8%	145-150	0.05	0.0%
30-35	20.56	5.9%	90-95	1.60	0.5%	150-155	0.05	0.0%
35-40	25.01	7.1%	95-100	0.80	0.2%	155-160	0.04	0.0%
40-45	29.27	8.4%	100-105	0.28	0.1%	160-165	0.03	0.0%
45-50	32.57	9.3%	105-110	0.20	0.1%	165-170	0.02	0.0%
50-55	35.83	10.2%	110-115	0.17	0.0%	170-175	0.01	0.0%
55-60	38.02	10.9%	115-120	0.15	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	91	26.1%
0-60	227	64.8%
0-90	346	98.9%
90-180	4	1.1%



### Candela Tabulation

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
	0	43.74	43.74	43.74	43.74	43.74	43.74	43.74	43.74	43.74	43.74	43.74	43.74	43.74	43.74	43.74
	5	42.26	42.26	42.26	42.26	42.26	42.26	42.26	42.26	42.26	42.26	42.26	42.26	42.26	42.26	42.26
	10	43.61	43.61	43.61	43.61	43.61	43.61	43.61	43.61	43.61	43.61	43.61	43.61	43.61	43.61	43.61
	15	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96
	20	52.55	52.55	52.55	52.55	52.55	52.55	52.55	52.55	52.55	52.55	52.55	52.55	52.55	52.55	52.55
	25	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48
	30	66.98	66.98	66.98	66.98	66.98	66.98	66.98	66.98	66.98	66.98	66.98	66.98	66.98	66.98	66.98
	35	72.46	72.46	72.46	72.46	72.46	72.46	72.46	72.46	72.46	72.46	72.46	72.46	72.46	72.46	72.46
	40	77.28	77.28	77.28	77.28	77.28	77.28	77.28	77.28	77.28	77.28	77.28	77.28	77.28	77.28	77.28
	45	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31
	50	80.97	80.97	80.97	80.97	80.97	80.97	80.97	80.97	80.97	80.97	80.97	80.97	80.97	80.97	80.97
	55	84.23	84.23	84.23	84.23	84.23	84.23	84.23	84.23	84.23	84.23	84.23	84.23	84.23	84.23	84.23
	60	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01
	65	74.48	74.48	74.48	74.48	74.48	74.48	74.48	74.48	74.48	74.48	74.48	74.48	74.48	74.48	74.48
	70	52.32	52.32	52.32	52.32	52.32	52.32	52.32	52.32	52.32	52.32	52.32	52.32	52.32	52.32	52.32
	75	44.74	44.74	44.74	44.74	44.74	44.74	44.74	44.74	44.74	44.74	44.74	44.74	44.74	44.74	44.74
	80	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30
	85	6.63	6.63	6.63	6.63	6.63	6.63	6.63	6.63	6.63	6.63	6.63	6.63	6.63	6.63	6.63
	90	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69
	95	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22
	100	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
	105	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
	110	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
	115	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
	120	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
	125	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
	130	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
	135	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
	140	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
	145	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	150	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
	155	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
	160	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
	165	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
	170	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
	175	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
	180	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

### Average Luminance (cd/m<sup>2</sup>)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	1349	1349
	45	8005	8005
	55	5069	5069
	65	4026	4026
	75	2207	2207
	85	312	312



### Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																	
0	416	416	416	416	406	406	406	406	387	387	387	370	370	370	354	354	354	346
1	372	352	333	317	361	343	327	312	327	313	301	312	301	291	299	290	281	273
2	330	295	267	243	320	288	262	239	275	252	233	262	243	227	250	235	221	212
3	295	251	217	190	285	245	213	188	233	206	184	222	199	180	212	193	176	167
4	265	216	180	153	256	211	177	151	201	172	148	192	166	146	183	161	143	134
5	240	188	152	125	232	184	150	124	175	145	122	168	141	120	160	137	118	110
6	219	166	130	104	211	162	128	104	155	125	102	148	121	101	142	118	99	91
7	201	148	113	89	194	144	111	88	138	109	87	132	106	86	127	103	85	77
8	185	132	99	76	179	130	98	76	124	96	75	119	93	74	115	91	73	66
9	172	120	88	66	166	117	87	66	113	85	65	109	83	65	105	81	64	57
10	160	109	79	59	155	107	78	58	103	76	58	99	75	57	96	73	57	50

### Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	43.74 Candela
Central Cone Intensity:	43 Candela
Beam Flux:	336.2 Lumens
Beam Angle (0-180):	157.7 Degrees
Beam Angle (90-270):	157.7 Degrees
Field Angle (0-180):	177.1 Degrees
Field Angle (90-270):	177.1 Degrees

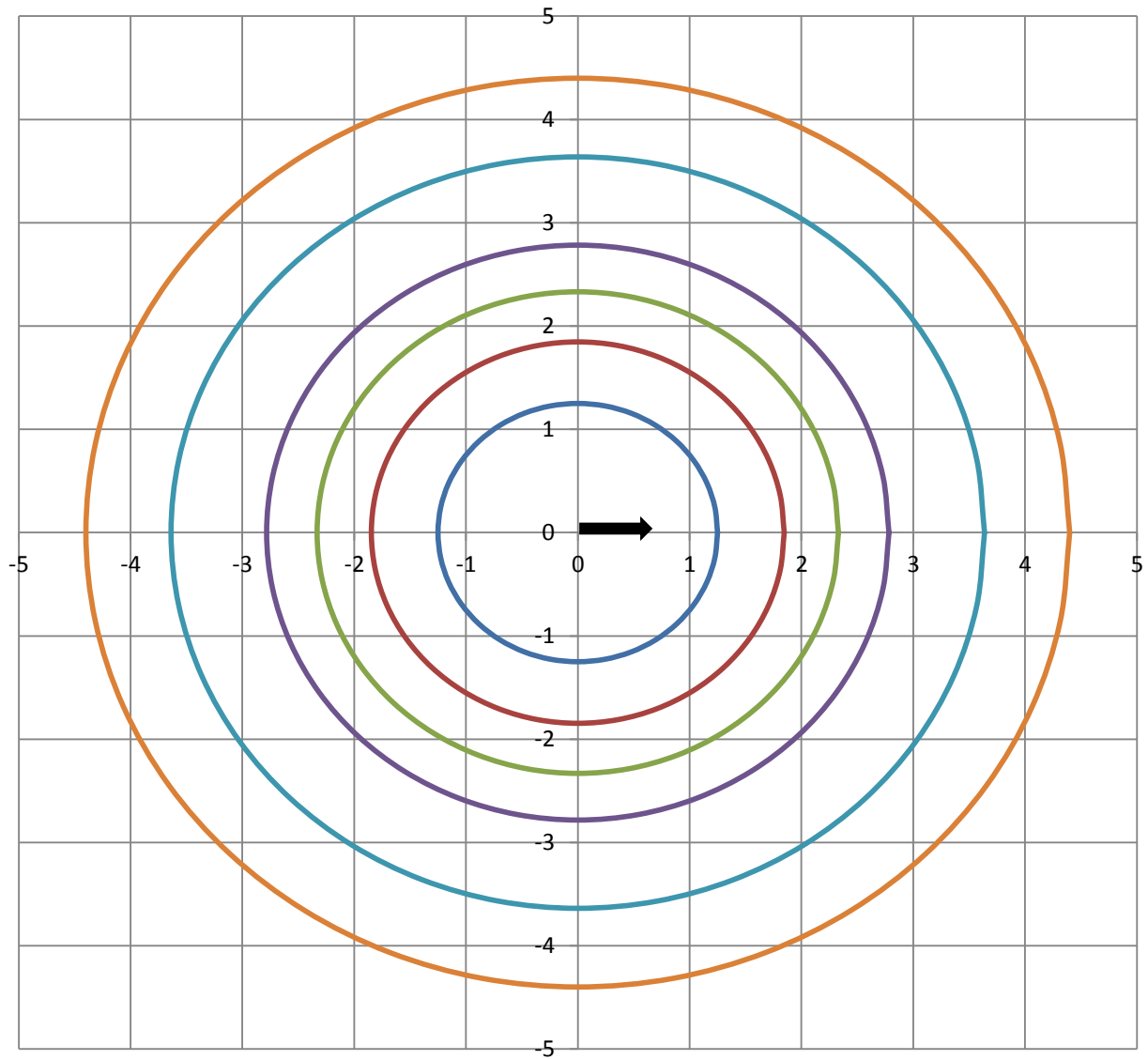
### Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		2.73	9.44
6.00		1.22	14.2
8.00		0.683	18.9
10.0		0.437	23.6
12.0		0.304	28.3
14.0		0.223	33.0
16.0		0.171	37.8



## ISOFootcandle Plot

Mounting Height - 2 Feet

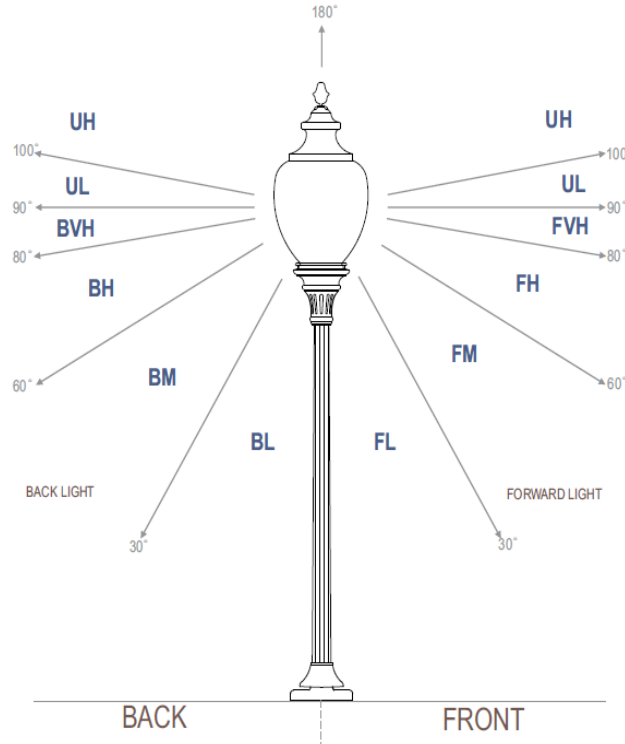


Grid Lines in Units of Mounting Height

5 fc    2 fc    1 fc    0.5 fc    0.2 fc    0.1 fc



**IES "BUG" Rating**  
(Back Light, Uplight, Glare)  
Per IES TM-15-11



**Luminaire Classification System (LCS)**

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	23.0	6.5%
FM	(30-60)	91.1	25.8%
FH	(60-80)	56.3	16.0%
FVH	(80-90)	4.1	1.2%
BL	(0-30)	23.0	6.5%
BM	(30-60)	91.1	25.8%
BH	(60-80)	56.3	16.0%
BVH	(80-90)	4.1	1.2%
UL	(90-100)	2.4	0.7%
UH	(100-180)	1.5	0.4%
Total		352.9	100.0%
<b>BUG Rating</b>	<b>B0 U1 G0</b>		